

GOLF PUTT TRAINING DEVICE AND METHOD

Cross Reference To Related Applications

This application is based on U.S. Provisional Application Ser. No. 60/409430, filed on October 10, 2002, which disclosure is incorporated herein by reference for all purposes.

Background of Invention

1) Field of the Invention

The present invention relates generally to putting aids and more specifically it relates to putt training devices and methods for training golfers to putt consistently and accurately.

2) Description of the Prior Art

It can be appreciated that laser putting aids have been in use for years. Typically, laser putting aids are comprised of customized training putters that incorporate a built in laser, and laser devices that attach to a putter. Another class of laser putting aids project a laser beam from a target back to the putter.

The main problem with conventional laser putting aids are in the case of customized training putters the golfer is not practicing with his own putter, which is a significant disadvantage. In the case of attached laser devices, they affect the mechanical properties of the putter, which is a significant disadvantage. In the final case, laser beams projected from the target back to the putter address only one aspect of the putting stroke; either face alignment or swing path.

1 Another problem with conventional laser putting aids are in the case of
2 customized training putters, they cannot be used on the golf course in accordance with the
3 rules of golf. In the case of attached laser devices, they cannot be used on the golf course
4 in accordance with the rules of golf. Another problem with conventional laser putting aids
5 is they do not address the entire putt stroke. Typically each putting aid addresses only one
6 aspect of the putting stroke, either putter face alignment, swing path alignment with the
7 target, distance control, target selection, or parallex aiming issues.

8 While these devices may be suitable for the particular purpose to which
9 they address, they are not as suitable for training golfers to putt consistently and
10 accurately. The main problem with conventional laser putting aids are in the case of
11 customized training putters the golfer is not practicing with his own putter, which is a
12 significant disadvantage. In the case of attached laser devices, they affect the mechanical
13 properties of the putter, which is a significant disadvantage.

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16 The importance of overcoming the various deficiencies noted above is
17 evidenced by the extensive technological development directed to the subject, as
18 documented by the relevant patent and technical literature. The closest and apparently
19 more relevant technical developments in the patent literature can be gleaned by considering
20 US 6,071,202 (Densberger et al) that shows a golf swing training method that projects one
21 long (infinite) line of light.

22 US 6,071,202(Densberger et al.) shows a golf swing training method.

23 US RE37,519E (Densberger et al.) shows a gold club with optical
24 alignment system.

25 US 6,213,887 B1(Carney) shows an apparatus for practicing the game
26 of golf.

27 US 5,879,239(Marcroglou) shows an alignment device.

28 US 6,6036,608(Morris) shows a golf putting apparatus.

- 1 US 5,207,429(Waimesley et al.) shows a club aiming unit.
- 2 US 6,007,436(Mark) teaches a laser light for putting.
- 3 US 5,818,036(Daly) disclose a laser putting device.
- 4 US 5,788,588(Hooker) teaches a putting training method.
- 5 US 5,527,041(Terry, III, et al.) shows a golf putting trainer.
- 6
- 7
- 8 However there is a need to improve current golf putt training devices.

Summary of the Invention

It is an object of embodiments of the invention to provide a device and method for projecting a highly visible alignment segment and highly visible aiming spot.

To accomplish the above objectives, the present invention provides an embodiment of golf putt training device which is characterized as follows. A light apparatus adapted to project an alignment segment and an aiming spot on a playing surface. The aiming spot is projected in front of a ball. The alignment segment is projected over said ball and a putter head. Whereby the alignment segment is used to align the putter head during a swing.

In an aspect of the invention, the light apparatus is comprised of a first light source and a second light source; the first light source projects the alignment segment and the second light source projects the aiming spot. The alignment segment and the aiming spot are about in a vertical plane.

An embodiment for a method for putt training can begin by projecting an *alignment segment* and an *aiming spot* from a light apparatus positioned above a playing surface onto a playing surface. A ball is positioned on a portion of the alignment segment on the playing surface. A putter head of a putter is placed behind the ball on a portion of the alignment segment. The putter head is aligned with the alignment segment. The putter head is moved to strike the ball using the alignment segment to maintain the alignment of the putter head with the alignment segment.

In an option the light apparatus is comprised of a first light source and a second light source; the first light source projects the alignment segment and the second light source projects the aiming spot. The alignment line and the aiming spot are about in a vertical plane.

In an option, the training method can further include:

- 1 a) aligning a putter head mark on the putter head with the alignment line; the
- 2 putter head mark about perpendicular with the face of the putter head; the
- 3 alignment segment and the light apparatus defining a plane about normal to the
- 4 playing surface;
- 5 b) locating an eye alignment device behind the ball along the alignment segment;
- 6 c) locating the eye of a golfer in the vertical plane above the playing surface so
- 7 that the golfer can see the alignment segment on the eye alignment device;
- 8 d) adjusting the swing of the putter so that the putter head mark remains aligned
- 9 with the alignment line; and
- 10 e) striking a ball with the putter head.

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13 Additional objects and advantages of the invention will be set forth in
14 the description that follows, and in part will be obvious from the description, or may be
15 learned by practice of the invention. The objects and advantages of the invention may be
16 realized and obtained by means of instrumentalities and combinations particularly pointed
17 out in the append claims.

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Brief Description of the Drawings

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The features and advantages of a golf training device and method according to the embodiments of the present invention will be more clearly understood from the following description taken in conjunction with the accompanying drawings in which like reference numerals designate similar or corresponding elements, regions and portions and in which:

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Figure 1 shows perspective view of the golf putting training device 100 according to an aspect of the invention.

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Figure 2 shows a perspective view of the putt training device 100 projecting the alignment segment 102 according to an aspect of the invention.

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Figures 3A, 3B and 3C are side views of the training device showing how the light apparatus can be rotated for a short putt, a medium putt and a long putt according to aspects of the invention.

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Figure 3A shows the light apparatus 130 rotated down along the axis of rotation 202 for a short putt according to an aspect of the invention.

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Figure 3B shows the light apparatus 130 positioned along the axis of rotation 202 for a medium distance putt according to an aspect of the invention.

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Figure 3C shows the light apparatus 130 positioned along the axis of rotation 202 for a longer putt according to an aspect of the invention.

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Figure 4 shows a top down view of an embodiment of the putt training device comprising an eye alignment device 400 preferably positioned behind the ball 114 along the alignment segment 102 according to an aspect of the invention.

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Figure 5A shows a perspective view of embodiment of an eye alignment device 400 according to an aspect of the invention.

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Figure 5B shows a cross sectional view of the eye alignment device 400 according to an aspect of the invention. Figure 5B illustrates how the eye alignment device enables the golfer to judge when her eyes are alignment in a vertical plane over the ball.

1 Figure 5C shows a perspective view of embodiment of an eye alignment
2 device with one about vertical panel according to an aspect of the invention.

3 Figure 6A is a front view of the putt training device 100 that has one
4 riser according to an aspect of the invention.

5 Figure 6B is a side view of the putt training device 100 that has one riser
6 according to an aspect of the invention.

7 Figure 6C is a front view of another embodiment of the putt training
8 device 100 that has two risers according to an aspect of the invention.

9 Figure 7 shows a cross sectional view of an embodiment of the light
10 apparatus 130.

11 Figure 8A shows a side view of an embodiment of the riser 134 where
12 the riser is comprised of a collapsible structure according to an aspect of the invention.

13 Figure 8B shows a side view of the embodiment of the riser 134.

14 Figure 9A shows a simplified cross sectional side view of the base 136
15 according to an aspect of the invention.

16 Figure 9B shows a power cable 924 that goes between the base and the
17 laser module according to an aspect of the invention.

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Detailed Description of the Preferred Embodiments

Example embodiments of the present invention will be described in detail with reference to the accompanying drawings. The embodiments of the present invention provide a method for a putt training and a putt training device. In one aspect, the putt training device can comprise a light apparatus and an optional eye alignment device. The light apparatus projects an (putter) alignment segment and an aiming spot on a playing surface.

Example embodiments of the invention will now be described by first referring to figure 1 which shows a golf putting training device 100 for use with a golf club and a ball in practicing a correct putting swing.

In the embodiment shown in figure 1, a golf putting training device 100 has a light apparatus 130 (e.g., a laser module) that projects an alignment segment 102 and an aiming spot 104 on a playing surface 112 (e.g., putting green). An eye alignment device 400 is preferably behind the ball 114. The light apparatus 130 projects visible light. The light apparatus 130 is positioned behind a ball 114 and the aiming spot 104 is projected in front of the ball. The light apparatus can be positioned in front of or behind or on the side of the ball. The (putter) alignment segment 102 is used to align a putter head 120 of a putter 118 during a swing. The alignment segment 102 is preferably projected near the ball in the area in front and behind the ball. Preferably the alignment segment 102 and the aiming spot 104 are about in a vertical plane or alignment line 107 on the playing surface (e.g., alignment plane 107).

Preferably the light apparatus does not project light between the alignment segment and the aiming spot.

The alignment segment 102 is preferably accomplished by an optical element which converts the light beam into a vertically-oriented, planar-shape, wherein the alignment 102 segment is formed at the intersection of the plane with the playing surface.

1 The light apparatus 130 is preferably comprised of a first light source
2 and a second light source. Preferably, the first light source projects the alignment segment
3 and the second light source projects the aiming spot. In an embodiment the first light
4 source is a first laser device and the second light source is comprised of a second laser
5 device. The light sources can be light emitting diodes or filament or arc lamps.

6 The first light source can be comprised of one or more laser devices.
7 Also, the second light source can be comprised of one or more laser devices.

8 A first advantage of the embodiment is that the alignment segment and
9 aiming spot are highly visible. In prior art golf devices one laser device (e.g., one LED) is
10 used to project one laser line at least from the ball to the target (i.e., hole) and beyond.
11 Thereby the brightness of laser line is diminished because the laser line is so long. In
12 contrast, the embodiment concentrates the light into an alignment segment and an aiming
13 spot. The embodiments' alignment segment 102A is shorter than the long (e.g., infinite)
14 laser lines. Preferably no light is projected between the alignment segment and an aiming
15 spot. Preferably no light is projected between the alignment segment and an aiming spot
16 using the same first and second sources.

17 A second advantage of the embodiment is that dedicated first and
18 second light sources (e.g., lasers) are used to project the alignment segment and aiming
19 spot. The embodiment's use of two light sources (e.g., dedicated lasers, lamps, or
20 filaments) allows a more concentrated light energy to be used.

21 The alignment segment preferably has a length between 18 inches and
22 36 inches long. The alignment segment can have a length between 10 % and 25% of the
23 distance between the ball and the aiming point. The alignment segment can have a length
24 of about between 80 % to about 120 % of the length of the putters head 120 travel (e.g.,
25 back swing point to follow thru point) and more preferably between 100 % to about 120
26 %. The alignment segment length can be minimized to concentrate the light energy in the
27 smallest area so that the light segment is bright and highly visible.

1 The aiming spot 104 is preferably a point of light. The aiming spot can
2 be small area of any shape but is preferably a point or segment with a length between 0.05
3 inch and 8 inches and preferably between 0.1 inch and 4 inches.

4 As shown in figure 1, in an embodiment the alignment segment 102 is
5 comprised of disconnected line segments 102A or a series of dashes 102A. In a preferred
6 embodiment the disconnected line segments have a length between about 0.5 and 2.0
7 inches.

8 The alignment segment is preferably accomplished by an optical
9 element which converts the light beam into a vertically-oriented, planar-shape, wherein the
10 alignment segment is formed at the intersection of the plane with the playing surface or
11 other object.

12 In an aspect, the putt training device 100 can be comprised of a base
13 136, a riser 134 and a light apparatus 130. In an aspect, the putt training device is
14 comprised of a mounting means for mounting the light apparatus above the playing
15 surface.

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17 Figure 1 shows a golfer 102 who is holding a putter 118 having a putter
18 head 120. The golfer is attempting to strike the ball 114 with the putter head 120 on an
19 intended target path 106 to a target 110 (e.g., golf hole). The intended target path is the
20 path the ball is intended to take to the target (e.g., hole). The alignment segment 102 and
21 the aiming spot 104 are not collinear or co-planar with the intended target path 106 (ball
22 path) since the playing surface is not perfectly flat and has topology that may curve the
23 path of the ball. No playing surface is perfectly flat. The intended target path 106 is the
24 path the ball will follow from the ball starting point to the target. The intended target path
25 106 is tangential to the alignment segment 102.

26 In the example shown in figure 1, the aiming spot 104 is to the right of
27 the target 110 because the playing surface 112 has a topology that can curve the path of the
28 ball to the left. The golfer aims at an aiming point that is not perfectly aligned with the

1 hole because the playing surface is not perfectly flat or level. Most times, the aiming spot
2 is closer to the ball than the hole. For example on figure 1, the aiming spot 104 is closer to
3 the ball 114 than the target 110. The golfer uses her judgment as to the curve of the
4 playing surface.

5 ***Figure 2 - putt training device***

6 Figure 2 shows a perspective view of the putt training device 100
7 projecting the alignment segment 102. In an embodiment the light apparatus can pivot on a
8 vertical plane on the axis of rotation 202. This allows the alignment segment and aiming
9 spot to be adjusted. By adjusting the light apparatus (refer to Figures 3A, 3B, and 3C) the
10 golfer can set the length of the alignment segment and aiming spot. The light apparatus
11 130 can be mounted in other ways.

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13 ***Figure 3A 3B and 3C - light apparatus rotated for different putt lengths***

14 Figures 3A, 3B and 3C are side views of the training device showing
15 how the light apparatus can be rotated for a short putt, a medium putt and a long putt.

16 Figure 3A shows the light apparatus 130 rotated down along the axis of
17 rotation 202 for a short putt.

18 Figure 3B shows the light apparatus 130 positioned along the axis of
19 rotation 202 for a medium distance putt.

20 Figure 3C shows the light apparatus 130 positioned along the axis of
21 rotation 202 for a longer putt.

22 The light apparatus preferably pivots in a vertical plane. As shown in
23 figures 3A, 3B and 3C, rotating the light apparatus counter-clockwise increases the
24 distance to the aiming spot as well as the length of the alignment segment. Conversely,
25 rotating the light module clockwise decreases the distance to the aiming spot as well as the
26 length of the alignment segment.

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1 ***Figure 4 - eye alignment device***

2 Figure 4 shows a top down view of an embodiment of the putt training
3 device comprising an eye alignment device 400 (e.g., parallax error eliminator device)
4 preferably positioned behind the ball 114 along the alignment segment 102 whereby the
5 eye alignment device 102 allows a golfer's eyes to be maintained about in the vertical
6 plane over the ball. The eye alignment device has a means for defining a plane where
7 parallax has been eliminated. Parallax is an apparent change in the direction of an object,
8 caused by a change in observational position that provides a new line of sight.

9 The eye alignment device 400 is preferably comprised of two spaced
10 about vertical panels 404 408. (See figure 5A).

11 ***Putter head marks***

12 Still referring to figure 4, the putter preferably further comprises a putter
13 head mark 122 on the top of the putter head 120. The putter head mark(s) 122 are
14 preferably about perpendicular with the face 123 of the putter. The putter head mark(s) is
15 on the "sweet spot" of the putter head. The putter head mark(s) is preferably one or more
16 lines on the top of the putter head. The putter head mark(s) can be non-reflective so that
17 the alignment segment can not be seen by the golfer when the putter head mark(s) is
18 aligned with the alignment segment. The top surface of the putter head can be reflective
19 (e.g., polished chrome) so that the alignment segment reflects up to the golfer when the
20 alignment segment is not aligned with the putter head mark. In addition, the putter head
21 mark can be reflective and the top surface of the putter head can be non-reflective. Also,
22 the putter alignment mark(s) can be grooves or raises areas in the putter head. Other
23 configurations of the putter head and putter head marks are possible.

24 Visual alignment aids that can be incorporated into putter designs are
25 primarily perpendicular grooves located on top of the putter blade, or, in the case of a
26 mallet-design putter, on the top surface of the sole. Such grooves can be highlighted by
27 the use of white, black, red, or other contrasting colors of paint or colored inserts. The

1 grooves, viewed in combination with the putter blade, are used to align the face of the
2 putter with the direction aimed..

3 During use, the swing of the putter is adjusted so that the putter head
4 mark remains aligned with the alignment segment that is projected on the top of the putter
5 head. For example, the light segment 102 can be maintained on or between the putter
6 head marks that can be lines perpendicular to the putter face. This ensures that the putter is
7 orthogonal to the alignment segment and that the “sweet spot” of the putter is aligned with
8 the center of the golf ball.

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10 ***Figures 5A, 5B and 5C - eye alignment device***

11 The eye alignment device 400 is comprised of at least one about vertical
12 panel that can be supported in any way. Figure 5A shows a perspective view of
13 embodiment of an eye alignment device 400. The eye alignment device 400 is preferably
14 comprised of two spaced about vertical panels 404 408 and a base 412. As shown in figure
15 1 and 4, the eye alignment device 400 is positioned behind the ball with the alignment
16 segment 120 positioned between the vertical panels 404 408. The eye alignment device
17 allows a golf's eyes to be maintained in the vertical plane over the ball.

18 Referring to figure 5A, an embodiment of the eye alignment device
19 (e.g., Parallax Error Eliminator device) is comprised of two parallel vertical panels 404
20 408 mounted to a base panel. The panels are preferably spaced between about 1/16 and
21 3/16 inch apart and most preferably approximately 1/8 inch apart. The eye alignment
22 device is placed within the alignment segment such that the segment lays in (the trough)
23 between the panels 404 408.

24 In another aspect, the eye alignment device is comprised of only one
25 vertical panel. The golfer can look down the vertical panel/plane seeing it as a line parallel
26 to and next to the laser segment. For example, as shown in figure 5C, the eye alignment
27 device is comprised of a vertical panel 408. Other examples of single panels for eye

1 alignment device aspect include, a panel from a box or a L – shaped device with a vertical
2 panel and a bottom base. Another example is a panel that is supported by stakes secured
3 in/on the playing surface.

4 The eye alignment device is preferably not attached to the golf club or
5 golfer.

6

7 Figure 5B illustrates how the eye alignment device enables the golfer to
8 judge when her eyes are alignment in a vertical plane over the ball.

9 The golfer's eye are shown in three positions 502 504 506 along with
10 the corresponding line of sight 502A 504A 506A.

11 If the golfer's eyes are not in the vertical plane the eye alignment device
12 400 (e.g., Parallax Error Eliminator) will block the alignment segment 102 (e.g. laser line)
13 from the golfer's view. For example, when the golf's eye 502 504 is not in the vertical
14 plane, the golfer can not see the (laser light) alignment segment between the panels 404
15 408. When the golfer's eyes 504 are in the vertical plane, the golfer can the alignment
16 segment 102 (laser line) between the panels.

17 The eye alignment device 400 can be made of any material and can be
18 scaled to any size that provide its function. The vertical panels 404 408 can have a height
19 so that if the golfer's eye's are not aligned over the alignment line, the panels will block
20 the golf's sight of the alignment segment between the panels.

21

22 As shown in figure 1, when the eye alignment device 400 is to be used
23 it is placed preferably behind the golf ball beyond the swing path of the putter so that the
24 alignment segment lies between the panels.

25

1 ***Figures 6A, 6B, 6C, and 6D - putt training d vice***

2 Figure 6A is a front view of an embodiment of the putt training device
3 100 that has one riser.

4 Figure 6B is a side view of the an embodiment of the putt training
5 device 100 that has one riser.

6 Figure 6C is a front view of another embodiment of the putt training
7 device 100 that has two risers. This embodiment is preferred over the one riser
8 embodiment because the two risers have more stability than one riser. Preferably the two
9 risers are collapsible and extendable.

10 Figure 6B is a side view of the another embodiment of the putt training
11 device 100 that has two risers.

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13 ***Figure 7 - light apparatus 130***

14 Figure 7 shows cross sectional view of an embodiment of the light
15 apparatus 130. The light apparatus 130 is preferably comprised of a laser module
16 enclosure 702, a pivot hub and axis of rotation 704, a power receptacle 706, two current
17 limiting resistors 708 722, two laser diodes 710 716, two collimating lenses 712 718,
18 windows for the laser beams 714 721, and a beam spreader 720.

19 The light apparatus 130 (e.g., Laser Module) preferably generates two
20 co-planar visible laser beams using laser diodes and optics. One beam 726 is spread and
21 preferably "chopped" to create a graticulated laser segment. The other beam 724 is aimed
22 in line with the laser segment but forward and beyond it. Each laser beam preferably has it
23 own laser source.

24

25 The light apparatus connects to the Riser, pivoting on the axel of the
26 Riser. A power cord connects to the laser module from the Base Module. The device 100
27 stands between 10 to 18 inches high and preferably approximately 14 inches high. The

1 riser can have a length between 4 inches (e.g., collapsed) and 16 inches (e.g., fully
2 extended).

3
4 Although Figure 7 shows a light apparatus comprised of two laser
5 diodes and a specific optical implementation, This aspect is not limited to the configuration
6 shown in figure 7. The embodiment can provide a coplanar alignment segment and an
7 aiming spot in many ways. For example, a single laser could be used by splitting its beam
8 and then generating a segment from one split beam and a spot from the other. Although,
9 specific optics are shown this embodiment does not rely a specific optic implementation.

10 ***Figures 8A and 8B - embodiment of the riser(s)***

11 Figure 8A shows side view of an embodiment of the riser 134 where the
12 riser is comprised of a collapsible structure, such as nested concentric cylinders (e.g., like a
13 collapsible car antenna).

14 Figure 8B shows a side view of the embodiment of the riser 134.

15 The riser supports the light apparatus 130 (Laser Module). It provides
16 an axle pin 704 that the light apparatus 130 (Laser Module) mounts to and rotates on. The
17 Riser preferably collapses for storage. The riser preferably is collapsible so as to ease
18 storage and carrying the Putt training device. The riser is adjustable in its height so as to
19 provide the optimum height for the light apparatus. The riser supports the light apparatus.
20 It can be made of any material that mechanically supports the light apparatus. In certain
21 cases the riser may be fixed and not extensible.

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23 ***Figures 9A and 9B - base and power cable***

24 Figure 9A shows a simplified cross sectional side view of the base 136.

25 The base 136 contains batteries 920, a power switch (914), an output
26 power connector (910), and an alternate external DC power receptacle (906). The batteries
27 provide power to the light apparatus (e.g., Laser Module). The power switch 914 provides

1 for turning power on and off to the light apparatus. The Output Power Connector 910
2 delivers power through a power cord 924 (figure 9b) to the light apparatus (e.g., Laser
3 Module). The Alternate External DC Power Receptacle 906 accepts external dc power
4 from an AC to DC converter module that plugs into a 115 VAC wall outlet. When
5 external power is available the batteries are electrically dormant.

6 The Base Module provides the mechanical support for the riser and light
7 apparatus (Laser Module). The Base Module can be made of any material and have any
8 shape that provides a suitable base for supporting the riser and light apparatus.

9 Figure 9B shows a power cable 924 that goes between the base and the
10 light apparatus (Laser Module). The power cable can be routed inside of the riser to the
11 light apparatus.

13 II. Method Embodiments

14 Referring to figures 1, 2, 3A, 3B, 3C and 4, an embodiment for a
15 method for putt training can begin by projecting an alignment segment 102 and an aiming
16 spot 104 from a light apparatus 130 onto a playing surface 112. The light apparatus is
17 positioned above a playing surface behind the ball, putter and target (e.g., hole). The
18 location or direction “behind the ball” is in reference to the target. The location in front of
19 the ball is also in reference to the target. The location in front of the ball is about between
20 the ball and the target (e.g., hole).

21 To practice short putts the golfer turns on the power switch and then
22 positions and rotates the light apparatus (Laser Module) until the desired alignment
23 segment and aiming spot are formed.

24 Next, a ball 114 is positioned on a portion of the alignment segment
25 102 on the playing surface. Preferably the golfer locates a golf ball near the middle of the
26 graticuated alignment segment such that the light alignment segment bisects the ball.

1 A putter head 120 of a putter is placed behind the ball 114 on a portion
2 of the alignment segment 102. The putter head 120 is aligned with the (putter) alignment
3 segment 102. The golfer preferably places the putter behind the ball with the putter head
4 alignment mark illuminated by the laser segment. This ensures that the putter is orthogonal
5 to the putting line and that the "sweet spot" of the putter is aligned with the center of the
6 golf ball to be putted. The order of these steps can be performed in any sequence.

7 The golfer pulls the putter back attempting to maintain the laser
8 alignment segment on the putter head mark. The golfer can gauge how far to pull back the
9 putter by watching the segments (graticules) 102A of the laser alignment segment. This
10 promotes distance control in putting.

11 The putter head 120 is moved to strike the ball 114 using the alignment
12 segment 102 to maintain the alignment of the putter head with the alignment segment 102.
13 After completing the back stroke, the golfer starts the putter forward on the laser segment
14 while maintaining the putter head mark(s) on the laser segment 102. The golfer continues
15 the stroke through the golf ball while maintaining putter alignment with the laser segment
16 102. When the golfer strikes the ball while maintaining alignment with the laser segment
17 102, the ball will roll towards the laser aiming spot 104 and will be illuminated by the
18 laser aiming spot beam.

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21 In an option the light apparatus 130 is comprised of a first light source
22 and a second light source. Preferably, the first light source projects the alignment segment
23 and the second light source projects the aiming spot. Preferably, the alignment segment
24 and the aiming spot are about in a vertical plane 107.

25 Referring to figure 4, the training method can which further include
26 aligning a putter head mark 122 on the putter head 120 with the alignment segment. The
27 putter head mark is about perpendicular with the face 123 of the putter head. The

1 alignment segment 102 and the light apparatus 130 a plane about normal to the playing
2 surface.

3 The putter can further comprises a putter head mark(s) on the top of
4 the putter head that about perpendicular with the face of the putter. Wherein the swing of
5 the putter is the adjusted so that the putter head mark remains aligned with the alignment
6 segment.

7 ***Eye alignment device***

8 An aspect of the invention is a method and apparatus for aligning putter
9 face in a desired direction and includes a eye alignment system having a means for
10 defining a plane where parallax has been eliminated. The eye alignment device/system is
11 comprised of a vertical plane that is aligned with light projected in an alignment plane (e.g.
12 107).

13 The golfer can incorporate the eye alignment device (Parallax Error
14 Eliminator device) into practice sessions by locating the eye alignment device 400. As
15 shown in Figures 4, 5A and 5B, this will ensure that the golfer is practicing with his/her
16 eyes over the golf ball. When preparing to putt the golfer can check that the laser line is in
17 view, this will ensure proper head position.

18 An eye alignment device 400 is located behind the ball along the
19 alignment segment.

20 Next, the eye of a golfer is located in the vertical plane above the
21 playing surface so that the golfer can see the alignment segment on the eye alignment
22 device.

23 The swing of the putter is adjusted so that the putter head mark 122
24 remains aligned with the alignment line.

25 Lastly, the ball 114 is struck with the putter head.

26 The putt head continues on the follow through and the golf attempts to
27 maintain the segment line aligned with the putter head mark 122.

1 As shown in figure 5A and 5B, the eye alignment device is comprised
2 of two spaced about vertical panels. The eye alignment device is positioned behind the
3 ball with the alignment segment positioned between the vertical panels. The golfer's eyes
4 are preferably maintained in the vertical plane over the ball using the eye alignment device.

5 In an example embodiment shown in Figure 1, the alignment segment
6 102 consists of a series of disconnected line segments 102A wherein a golfer can gage
7 how far to pull back the putter head by watching the dashes of the first projected line of
8 light thus promotes distance control in putting.

9

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11 Given the variety of embodiments and aspects of the present invention
12 just described, the above description and illustrations should not be taken as limiting the
13 scope of the present invention defined by the claims.

14 While the invention has been particularly shown and described with
15 reference to the preferred embodiments thereof, it will be understood by those skilled in
16 the art that various changes in form and details may be made without departing from the
17 spirit and scope of the invention. It is intended to cover various modifications and similar
18 arrangements and procedures, and the scope of the appended claims therefore should be
19 accorded the broadest interpretation so as to encompass all such modifications and similar
20 arrangements and procedures.

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